

**MICHIGAN DEPARTMENT OF CIVIL SERVICE  
JOB SPECIFICATION**

**INFORMATION TECHNOLOGY PROGRAMMER/ANALYST**

**JOB DESCRIPTION**

Employees in this job function as information technology professionals, participating in or overseeing a variety of analytical and programming assignments that provide for the development, enhancement, and maintenance of automated data, voice, or video application programs, application systems, and operating systems software within mainframe, network, and client server environments. This classification is included in the Group Two Performance Pay Program.

There is one classification in this job.

**Position Code Title –Information Technology Programmer/Analyst-E**

**Information Technology Programmer/Analyst**

This is the entry through advanced levels. The employee performs a full range of professional assignments in a full functioning capacity. Considerable independent judgement is used to make decisions in carrying out assignments that have significant impact on services or programs. Guidelines may be available, but require adaptation or interpretation to determine appropriate courses of action.

**JOB DUTIES**

**NOTE:** The job duties listed are typical examples of the work performed by positions in this job classification. Not all duties assigned to every position are included, nor is it expected that all positions will be assigned every duty.

Writes, compiles, and modifies applications programs for computerized systems and keys into program code.

Develops or acquires test data and runs tests to determine the accuracy of program logic to produce desired results; debugs and revises programs based on test results.

Uses program specifications to prepare the logic sequence of program source statements in the development, modification, documentation, and maintenance of computer programs.

Develops and prepares documents for the general design of solutions that meet system requirements, including the selection of alternative approaches.

Develops applications to be used in client server environments.

Develops and maintains automated data processing systems and computer application programs.

Develops specifications to detail what new systems or enhancements to existing systems can accomplish.

Develops specifications for hardware and software configurations.

Develops operational and installation procedures for hardware and software.

Serves as liaison with users concerning requests, usage, standards, and other developmental and production matters.

Develops structured diagrams for the specifications of computer programs.

Develops detailed systems operations designs.

Tests programs and systems and integrates system modules.

Converts and implements new systems or upgrades existing systems.

Develops, implements, and monitors information technology quality assurance standards.

Develops cost estimates for systems development and upgrades to existing systems.

Evaluates equipment and software for purchase; provides training or arranges for vendor training for system users.

Evaluates, implements and provides customer support for third-party software systems in a client server environment.

Maintains records and prepares reports and correspondence related to the work.

Performs related essential functions appropriate to the class, as required.

## **JOB QUALIFICATIONS**

### **Knowledge, Skills, and Abilities**

Considerable knowledge of programming languages such as C++, Visual Basic, COBOL, and other generative and contemporary languages such as Powerbuilder and Java.

Considerable knowledge of structured programming methodology.

Considerable knowledge of database design methods and support utilities.

Considerable knowledge of personal computers and personal computer software.

Considerable knowledge of file maintenance and report generation methods.

Considerable knowledge of interactive processing and remote printing.

Considerable knowledge of data communication and transaction based processing.

Considerable knowledge of systems development methodology used in the development of new systems enhancements for existing manual or automated data processing systems.

Considerable knowledge of the fundamental concepts and operating principles of data communications and data processing hardware and software.

Considerable knowledge of the fundamental principles, theories, techniques, and methodologies of data processing systems analysis.

Considerable knowledge of computer programming, data modeling, and object-oriented programming procedures and techniques.

Considerable knowledge of application development environments and related tools.

Considerable knowledge of rapid application development tools.

Ability to prepare detailed written instructions and documentation.

Ability to analyze instructions and data.

Ability to convert specifications to computer language.

Ability to gather and analyze facts, define problems, and devise solutions.

Ability to plan and develop basic and detailed mechanical and clerical procedures for use in data processing systems.

Ability to use programming procedures and techniques in the implementation of computer programs.

Ability to effectively make oral and written reports and presentations and prepare clear and concise graphs and charts.

Ability to conduct interviews and establish and maintain effective relationships with systems users.

Ability to maintain records, prepare reports, and conduct correspondence related to the work.

Ability to communicate technical terminology at a level appropriate to the audience.

**Working Conditions**

None.

**Physical Requirements**

None.

**Education**

Possession of a bachelor's degree with 21 semester (32 term) hours in computer science, data processing, computer information systems, data communications, networking, systems analysis, computer programming, or mathematics.

**Experience**

No specific amount or type is required.

**Alternate Education and Experience**

Possession of an associate's degree with course work 16 semester (24 term) hours in computer science, data processing, computer information systems, data communications, networking, systems analysis, computer programming, mathematics or equivalent; and two years of experience as an application programmer, computer operator, or information technology technician.

Educational level typically acquired through completion of high school and three years of experience as an application programmer, computer operator, or information technology technician.

**Special Requirements, Licenses, and Certifications**

Certain positions may require certification in specific information technology programs.

**NOTE:** Equivalent combinations of education and experience that provide the required knowledge, skills, and abilities will be evaluated on an individual basis.

**JOB CODE, POSITION TITLES AND CODES, AND COMPENSATION INFORMATION**

**Job Code**  
INFTHPA

**Job Code Description**  
Information Technology Programmer/Analyst

**Position Title**

Information Technology Programmer/Analyst-E

**Position Code**

ITPRANE

**Pay Schedule**

NERE-014P

ECP Group 2  
Revised 12/11/00  
RBG/VLWT/RG/SDK